

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6580 (1972): Train Lighting Belt Fasteners [PGD 31:
Bolts, Nuts and Fasteners Accessories]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



Indian Standard “पनर्पण्ट १६६५”
SPECIFICATION FOR
TRAIN LIGHTING BELT FASTENERS

(First Reprint AUGUST 1986)

UDC 621.852.052:621.313.12:628.977.8(625.2)



© Copyright 1972

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR TRAIN LIGHTING BELT FASTENERS

Pulleys and Belts Sectional Committee, EDC 42

Chairman

SHRI N. V. KRISHNAMURTHY

Representing

The Association of Rubber Manufacturers in India,
Calcutta; and Dunlop India Ltd, Calcutta

Members

SHRI L. M. BASU ROY (<i>Alternate to</i> Shri N. V. Krishnamurthy)	
DR D. BANERJEE	National Rubber Manufacturers Ltd, Calcutta
DR M. L. BHAUMIK (<i>Alternate</i>)	Directorate General of Mines Safety, Dhanbad
SHRI K. BHATTACHARYA	
SHRI L. RAMACHANDRA (<i>Alternate</i>)	Heavy Machine Building Plant, Heavy Engineering Corporation Ltd, Ranchi
SHRI S. GHOSH	
SHRI M. P. SINGH (<i>Alternate</i>)	
SHRI M. W. HINCHLIFFE	Fenner, Cockill Ltd, Madurai
SHRI N. K. BHATTACHARYA (<i>Alternate</i>)	
SHRI O. N. KOHLI	Research, Designs and Standards Organization (Ministry of Railways), Lucknow
SHRI M. S. ARORA (<i>Alternate</i>)	
SHRI J. N. LAHIRI	The Indigenous Belting Industries Association, Calcutta
DR S. P. LUTHRA	The Institution of Engineers (India), Calcutta
SHRI S. D. MAJUMDAR	National Test House, Calcutta
SHRI V. N. MAKAR	Indian Rubber Industries Association, Bombay
SHRI K. R. SENGUPTA (<i>Alternate</i>)	
SHRI C. P. S. MENON	The British India Corporation Ltd, Kanpur
SHRI K. G. PARIKH	The Millowners' Association, Bombay
SHRI T. D. RAJAN	Hindustan Steel Ltd, Ranchi
SHRI J. GANGULY (<i>Alternate</i>)	
DR N. RAMANATHAN	Central Leather Research Institute (CSIR), Madras
SHRI G. K. RAO	Research & Development Organization (Ministry of Defence), Poona
MAJ S. N. GUPTA (<i>Alternate</i>)	
REPRESENTATIVE	Indian Jute Mills Association, Calcutta
SHRI A. K. ROY	The National Tannery Co Ltd, Calcutta
SHRI A. M. ROY	Birkmyre Brothers Ltd, Calcutta
SHRI P. K. SUR	Indian Rope Manufacturers' Association, Calcutta

(Continued on page 2)

**INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI**

IS : 6580 - 1972

(Continued from page 1)

<i>Members</i>	<i>Representing</i>
SHRI M. B. TAWADEY	National Coal Development Corporation Ltd, Ranchi
SHRI K. RAGHURAMAN (<i>Alternate</i>)	
SHRI M. V. PATANKAR, Director (Mech Engg)	Director General, ISI (<i>Ex-officio Member</i>)

Secretary
SHRI S. CAPOOR
Assistant Director (Mech Engg), ISI

Flat Cotton and Rubberized Belts Subcommittee, EDC 42 : 1

<i>Convener</i>	
DR D. BANERJEE	National Rubber Manufacturers Ltd, Calcutta

<i>Members</i>	
SHRI S. C. BANERJEE	Directorate General of Technical Development, New Delhi
SHRI L. M. BASU ROY	Dunlop India Ltd, Calcutta
SHRI T. C. PAUL (<i>Alternate</i>)	
SHRI K. BHATTACHARYA	Directorate General of Mines Safety, Dhanbad
SHRI M. W. HINCHLIFFE	Fenner, Cockill Ltd, Madurai
SHRI N. K. BHATTACHARYYA (<i>Alternate</i>)	
SHRI V. N. MAKAR	Oriental Rubber Industries Pvt Ltd, Bombay
SHRI SADANAND MAKAR (<i>Alternate</i>)	
SHRI H. K. MOHANTY	Hindustan Steel Ltd, Ranchi
SHRI S. P. MULICK	National Test House, Calcutta
SHRI R. NAGCHAUDHURI	Goodyear India Ltd, Calcutta
SHRI D. C. SEN (<i>Alternate</i>)	
SHRI B. ROY	The East India Rubber Works Pvt Ltd, Calcutta
SHRI K. SUBRAHMANYAM	Ahmedabad Textile Industry's Research Association, Ahmedabad
SHRI R. N. TARAFDAR	Central Mining Research Station (CSIR), Dhanbad
SHRI M. B. TAWADEY	National Coal Development Corporation Ltd, Ranchi
DR UMA SHANKAR	Indian Rubber Industries Association, Bombay
SHRI K. R. SENGUPTA (<i>Alternate</i>)	

AMENDMENT NO. 1 SEPTEMBER 1977
TO
IS : 6580-1972 SPECIFICATION FOR
TRAIN LIGHTING BELT FASTENERS

Alterations

(*Page 3, clause 0.4*) — Substitute the following for the existing clause:

'0.4 A belt punch and cutting tool is illustrated in Appendix A.'

[*Page 4, Table 1, Sl No. (iii)*] — Substitute the following for the existing matter under the respective headings:

'iii)	Self-locking nut	a) Carbon steel	2600-1964†	B
		b) Nylon	—	—

(*Page 5, Fig. 1, Outer Plate (with 2 holes)*] — Substitute '22.5' for '21.85'.

[*Page 5, Fig. 1, Outer Plate (with 3 holes)*] — Substitute '3R' for '3.5R'.

Addenda

(*Page 3, clause 1.1.1*) — Add the following new sentence at the end:

'Fasteners with two holes are meant for belting of 75 mm width.'

(*Page 4, clause 3.1*) — Add the following new clauses after the existing clause:

'3.2 The serrations shall be 0.7 ± 0.05 mm deep and shall be 4 mm apart. The inclination of serrations with respect to the sides of the plates shall be $45 \pm 2^\circ$ and the angle of V grooves of serrations shall be $60 \pm 2^\circ$.

3.3 The bolts and nuts shall conform to fine grade of tolerance; class 4h for bolts and class 5H for nuts as prescribed in IS : 4218 (Part IV)-1967 ISO metric screw threads: Part IV Tolerancing system.'

[*Page 5, Fig. 1, Bolt with SQ Neck (Enlarged)*] — Add '2.5 mm' as the length of square neck of bolt.

(*Page 5, Fig. 1*) — Add the following note:

'NOTE — Tolerance of ± 0.2 mm shall apply on all dimensions except where otherwise stated.'

Indian Standard

SPECIFICATION FOR TRAIN LIGHTING BELT FASTENERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 29 June 1972, after the draft finalized by the Pulleys and Belts Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 These fasteners are used to fasten two ends of train lighting belting which is covered by IS : 6583-1972*. The reliability of these fasteners is essential to ensure that there is no breakdown in the passenger amenities, like lighting end air circulation devices in train compartments.

0.3 This standard has been prepared in consultation and agreement with the Research Designs and Standards Organization, Ministry of Railways.

0.4 A belt punch and die is illustrated in Appendix A.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the material, dimensions, inspection and testing of belt fasteners used for fastening the train lighting belting for driving dynamo pulley from the axle of a coach.

1.1.1 These fasteners are meant for use on train lighting belting of widths 75, 100 and 125 mm.

2. MATERIAL

2.1 The material used for the various components of the fasteners shall be of a quality not less than those specified in Table 1.

*Specification for train lighting belting.

†Rules for rounding off numerical values (*revised*).

**TABLE 1 MATERIALS OF CONSTRUCTION OF TRAIN
LIGHTING BELT FASTENERS**

(Clauses 2.1 and 5.3)

SL NO.	COMPONENT	MATERIAL	IS SPECIFICATION	GRADE
i)	Outer plates and Central plate	Hot-rolled carbon steel sheet	1079-1968*	St-34
ii)	Bolts (cup head square neck)	Carbon steel	2609-1964†	B
iii)	Self-locking nut	Carbon steel or nylon	2609-1964†	B
iv)	Washer	Low carbon steel	2016-1967‡	—

*Specification for hot rolled carbon steel sheet and strip (*second revision*).

†Specification for coach bolts (M6 to M24).

‡Specification for plain washers (*first revision*).

2.2 The outer and the central plates shall be hot-dipped galvanized to the requirements of IS:2629-1966*.

3. CONSTRUCTIONAL DETAILS AND DIMENSIONS

3.1 The constructional details and dimensions of fasteners shall conform to Fig. 1.

4. SAMPLING

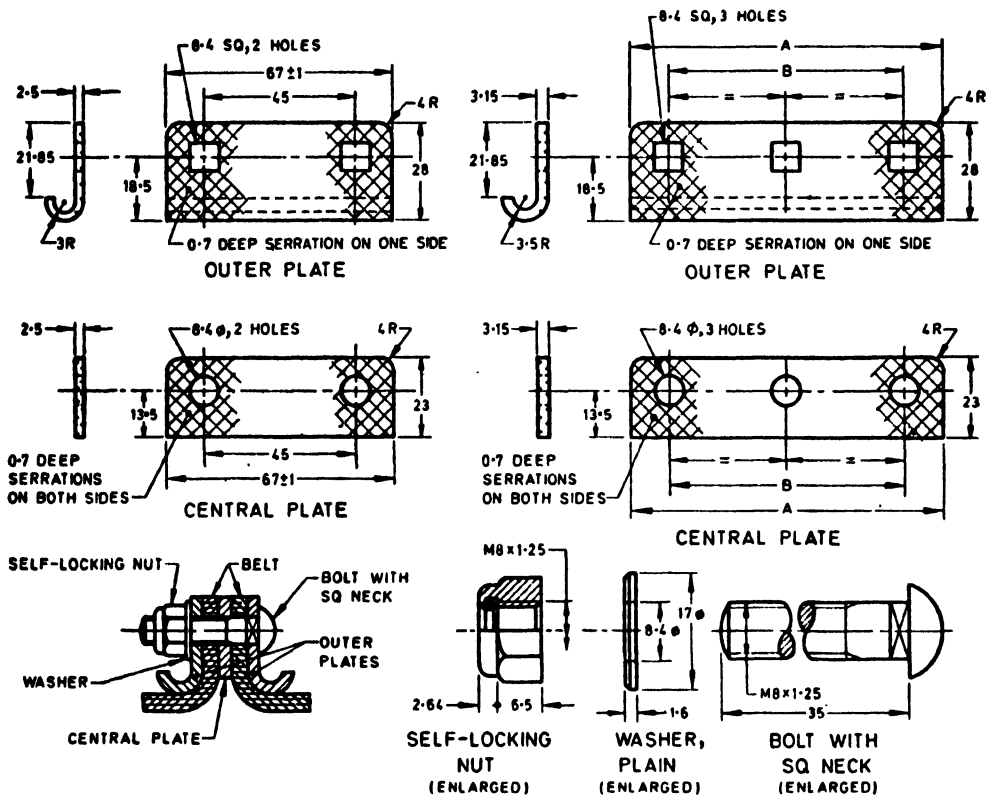
4.1 The sampling of belt fasteners for the purpose of tests in 5 shall be done in accordance with IS:2614-1969†.

5. INSPECTION, TESTING AND REJECTION

5.1 Visual Inspection — The samples selected according to 4.1 shall be visually inspected for freedom from defects, such as cracks, missing threads, rust, burrs, etc.

*Recommended practice for hot-dip galvanizing of iron and steel.

†Methods for sampling of fasteners (*first revision*).



Belt width	100 (4 Ply)	125 (4 Ply)
A	92±1	117±1
B	70	80

All dimensions in millimetres.

FIG. 1 DIMENSIONS FOR BELT FASTENERS WITH TWO HOLES AND THREE HOLES

5.2 Dimensions — The belt fastener samples selected shall be inspected for conformity to dimensions given in Fig. 1.

5.3 Chemical Analysis — If desired by the purchaser the various components of at least one fastener in a batch offered for supply shall be subjected to chemical analysis to prove the conformity to materials specified in Table 1 and galvanizing specified in 2.2.

5.4 Rejection — Should any sample fail to comply with the specified tests two additional sets of samples shall be drawn and tested at the cost of the manufacturer or supplier. In the event of either of these two failing to comply with the test the whole consignment shall be liable to rejection.

6. TESTING FACILITIES

6.1 The manufacturer or supplier shall possess all facilities at his own premises to carry out the tests specified failing which the tests shall be carried out at any approved laboratory at the cost of the manufacturer or the supplier.

7. DESIGNATION

7.1 Each fastener shall indicate

- a) the size of the belt with which it is to be used, and
- b) the number of this specification.

Example:

The train lighting belt fastener to this specification suiting belt width of 100 mm shall be designated as:

- TLB Fastener, 100, IS : 6580

8. MARKING

8.1 Outer plates of the fastener shall be marked with the manufacturer's identification.

8.2 An indication conforming to IS:1367-1967* for metric fastener shall be indented on the bolts and nuts.

8.3 A suitable label giving following information shall be pasted on all packages containing fasteners:

- a) Manufacturer's identification.
- b) Size of belt to which the fastener is suited, and
- c) Quantity.

8.4 Each belt fastener may also be marked with the ISI Certification Mark.

NOTE --- The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an

*Technical supply conditions for threaded fasteners (first revision).

Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

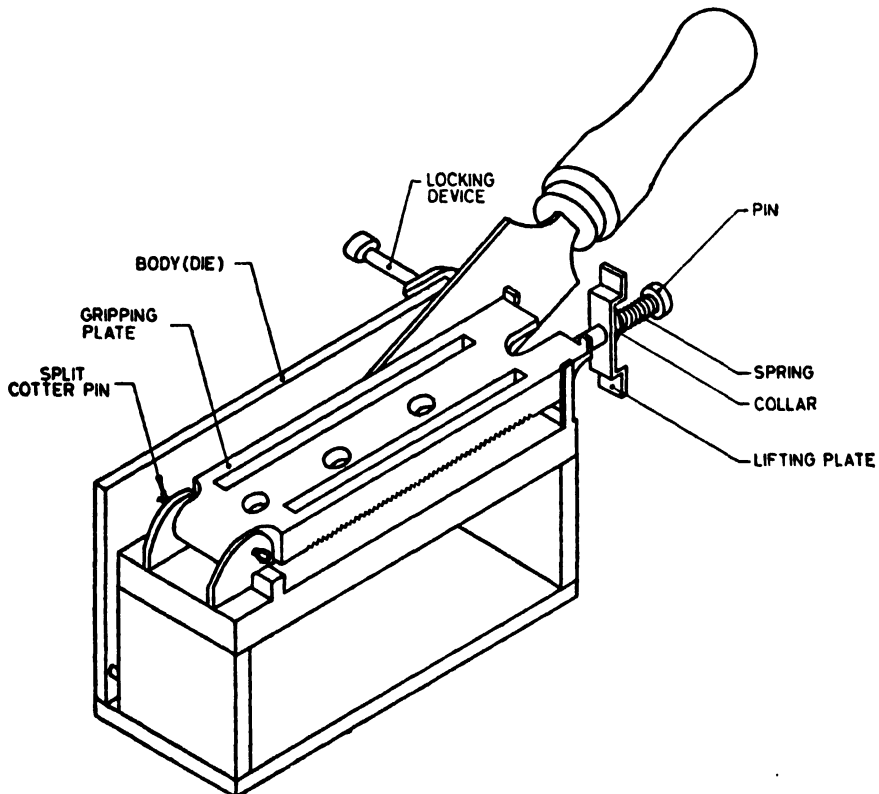
9. PACKING

9.1 The fasteners shall be packed in cardboard boxes of suitable size and supplied in wooden cases.

APPENDIX A

(Clause 0.4)

BELT PUNCH AND DIE



INDIAN STANDARDS INSTITUTION

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002
Telephones : 331 0131
331 1375

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices:

		Telephone
*Western	: Manakalaya, E9 MIDC, Marol Andheri (East) BOMBAY 400093	6 32 92 95
† Eastern	: 1/14 C. I. T. Scheme VII M V. I P. Road, Maniktola CALCUTTA 700054	36 24 99
Northern	: SCO 445-446, Sector 35-C CHANDIGARH 160036	{ 2 18 43 3 16 41
Southern	: C. I. T. Campus MADRAS 600113	{ 41 24 42 41 25 19 41 29 16

Branch Offices:

'Pushpak', Nurmohamed Shaikh Marg, Khanpur AHMADABAD 380001	{ 2 63 48 2 63 49
F' Block, Unity Bldg, Narasimharaja Square BANGALORE 560002	22 48 05
Gangotri Complex, 5th Floor, Bhadbhada Road, T. T. Nagar BHOPAL 462003	6 67 16
Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002	5 36 27
53/5 Ward No. 29, R. G. Barua Road, 5th Byelane GUWAHATI 781003	—
6-8-56C L. N. Gupta Marg, HYDERABAD 500001	22 10 83
R14 Yudhister Marg, C Scheme, JAIPUR 302005	{ 6 34 71 6 98 32
117/418 B Sarvodaya Nagar, KANPUR 208005	{ 21 68 76 21 82 92
Pathiputra Industrial Estate, PATNA 800013	6 23 05
Hantex Bldg (2nd Floor), Rly Station Road, TRIVANDRUM 695001	52 27
<i>Inspection Office (With Sale Point):</i>	
Institution of Engineers (India) Building, 1332 Shivaji Nagar PUNE 411005	6 24 35

*Sales Office in Bombay is at Novelty Chambers, Grant Road, BOMBAY 400007 89 65 28

†Sales Office in Calcutta is at 5 Chowringhee Approach, P.O. Princep Street, CALCUTTA 700072 27 68 00